

# Unit Planning Guide: Grade 2 Unit 5 of 8

<b>Unit Title:</b> Measurement	<b>Pacing (Duration of Unit):</b> 4 weeks
<b>Grade:</b> 2	<b>Buffer Day(s):</b> 5 days

## Desired Results

### Transfer Goals (Priority practice standards in **bold**)

*Students will be able to independently use their learning to:*

- MP.1. Make sense of problems and persevere in solving them.
- MP.2. Reason abstractly and quantitatively.
- MP.3. Construct viable arguments and critique the reasoning of others.
- MP.4. **Model with mathematics.**
- MP.5. **Use appropriate tools strategically.**
- MP.6. **Attend to precision.**
- MP.7. Look for and make use of structure.
- MP.8. Look for and express regularity in repeated reasoning.

### Established Goals (2011 MA Curriculum Frameworks Standards Incorporating the Common Core State Standards)

#### Prerequisite Standards:

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#### Standards (Priority Standards in **bold**):

- 2.OA.2: Fluently add and subtract within 20 using mental strategies. By end of grade 2, know from memory all sums of two one-digit numbers.
- 2.OA.MA.2a: By the end of grade 2, know from memory related subtraction facts of sums of two one-digit numbers.
- **2.MD.1: Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.**
- **2.MD.2: Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.**

#### WIDA for English Language Learners

Standard 1: ELLs **communicate** for **Social** and **Instructional** purposes within the school setting

Standard 3: ELLs **communicate** information, ideas and concepts necessary for academic success in the content area of **Mathematics**

In the lesson planning stage, teachers will need to differentiate lessons for ELLs. In order to accomplish this they will need: 1.) this curriculum map, 2.) a list of their ELLs and their proficiency levels, and 3.) appropriate language function expectations and scaffolds or supports.

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- **2.MD.3:** Estimate lengths using units of inches, feet, centimeters, and meters.
- **2.MD.4:** Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.
- **2.MD.5** Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.
- **2.MD.6** Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.
- **2.MD.9** Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.

### Meaning (\*Mostly assessed through Performance Tasks/Assessments)

**Big Ideas:** (Statements and concepts written in teacher friendly language which reflect the important [but not obvious] generalizations we want students to be able to arrive at. These are used by the teacher to focus daily instruction.)

- Length of objects can be measured using customary and metric units
- Customary units can be compared and metric units can be compared, but customary and metric units can not be compared. For example, 36 inches = 1 yard, 100 centimeters = 1 meter but 1 meter does NOT equal 1 yard
- A ruler, yardstick and meter stick are special types of number lines
- Lengths with same units can be added and subtracted
- Line plots are useful tools for collecting data because they show the number of things along a number line
- The unit determines the size of the result; for example, # of inches is larger than #

**Essential Questions:** (Questions which frame ongoing and important inquiries about the big ideas. They are written for students and used in daily instruction to help engage students in meaningful thinking.)

- How does “what” we measure influence “how” we measure?
- How does using a different unit change the measurement?
- How does a line plot help show data?
- How can using a number line help when solving problems?

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<p>of feet</p> <ul style="list-style-type: none"> <li>• A number line is a tool to solve problems</li> </ul>	
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Acquisition (*Mostly assessed through traditional summative assessments)	
<p><b>Knowledge:</b> Key basic concepts, facts, and key terms (written in phrases) students should be able to recall independently.</p> <p><i>Students will know ...</i></p> <ul style="list-style-type: none"> <li>• Objects can be measured with customary and metric units</li> <li>• Objects can be measured in standard and nonstandard units</li> <li>• There are 12 inches in a foot, 3 feet in a yard and 100 centimeters in a meter</li> <li>• The same object or many objects of the same size such as paper clips can be repeatedly used to determine the length of an object</li> <li>• The smaller the unit, the more units it will take to measure an object</li> <li>• A number line toll that can be used to display data and add and subtract</li> </ul> <p><b>Key Academic Vocabulary</b></p> <ul style="list-style-type: none"> <li>• Inch</li> <li>• Foot</li> <li>• Yard</li> <li>• Centimeter</li> <li>• Meter</li> <li>• Line plot</li> </ul>	<p><b>Skills:</b> The discrete skills and process students should be able to use independently.</p> <p><i>Students will be skilled at:</i></p> <ul style="list-style-type: none"> <li>• Measuring lengths of objects using the appropriate tool, ruler, yard stick, meter stick and measuring tape (Applying)</li> <li>• Estimating lengths using inches, feet, centimeters and meters (Applying)</li> <li>• Comparing the length of objects using the same units and expressing the difference in the same units (Analyzing)</li> <li>• Using addition and subtraction within 100 to solve word problems involving lengths (Applying)</li> <li>• Using equations with a symbol for the unknown number to represent the problem (Applying)</li> <li>• Creating a number line with equally spaced points starting at 0 (Creating)</li> <li>• Representing whole number sums and differences within 100 on a number line (Applying)</li> <li>• Generating measurement data and displaying it on a line plot where the horizontal scale is marked off in whole number units (Creating)</li> </ul>

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- Number line
- Ruler
- Yard stick
- Meter stick
- Measuring tape

**Resource Suggestions:**

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